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=> fil reg
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STRUCTURE FILE UPDATES:   20 JUL 2010  HIGHEST RN 1233316-91-0
DICTIONARY FILE UPDATES:  20 JUL 2010  HIGHEST RN 1233316-91-0

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http://www.cas.org/support/stngen/stndoc/properties.html

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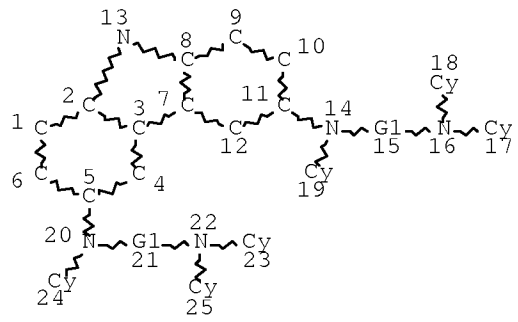


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VAR G1=AK/CY
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS  25

STEREO ATTRIBUTES: NONE
L5            6 SEA FILE=REGISTRY SSS FUL L3
L14           6 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L5


=> fil hcap
FILE 'HCAPLUS' ENTERED AT 14:09:25 ON 22 JUL 2010
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FILE COVERS 1907 - 22 Jul 2010 VOL 153 ISS 4
FILE LAST UPDATED: 21 Jul 2010 (20100721/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2010

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2010.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l14 1-6 ibib ed abs hitstr hitind

L14 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2008:1282001 HCAPLUS Full-text
DOCUMENT NUMBER: 149:494318
TITLE: Sulfonated polymeric compound, its intermediate, and organic electroluminescent device containing the compound
INVENTOR(S): Sekiguchi, Michiru; Togashi, Kazuhiko
PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Japan
SOURCE: PCT Int. Appl., 165pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008126393	A1	20081023	WO 2008-JP861	20080403

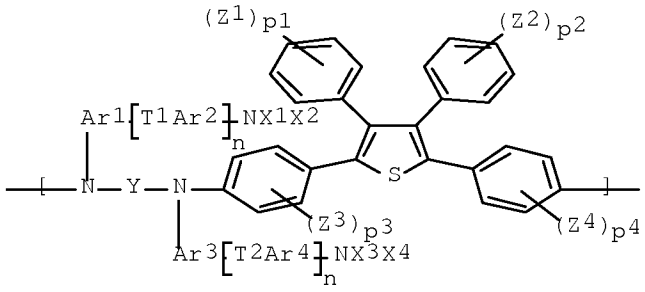
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE,

SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: JP 2007-98103 A 20070404

ED Entered STN: 24 Oct 2008

GI



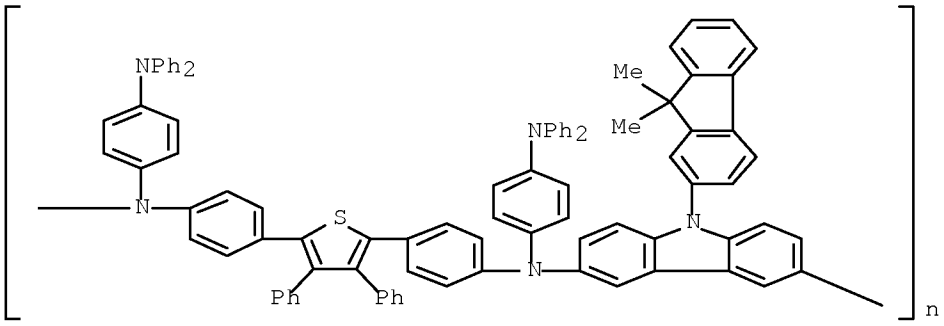
I

AB A sulfonated polymeric compound, and its intermediate, which sulfonated polymeric compound is characterized by having the structure resulting from introduction of a sulfo group in a polymeric compound having, in its polymer chain, ≥1 of the repeating units (I) (wherein each of Z1 to Z4 is a substituent; each of p1 and p2 is an integer of 0 to 5; each of p3 and p4 is an integer of 0 to 4; each of X1 to X4 is a monovalent aromatic group, provided that X1 and X2, and X3 and X4, may be bonded with each other to thereby form a ring; Y is a bivalent aromatic group; each of Ar1 to Ar4 independently is a bivalent aromatic group, provided that the bivalent aromatic group may be an aromatic group resulting from bonding of aromatic groups to each other leading to cyclization; each of T1 and T2 independently is a single bond or a group selected from the group consisting of -(CH2)t-, -CH=CH-, -C≡C-, -O-, -S-, -CQ1Q2-, -CO-, -SO-, -SO2- and -SiE2-; t is an integer of 1 to 20; each of Q1 and Q2 is an alkyl or an aromatic group, provided that these may be bonded with each other to thereby form a ring; E is a hydrogen atom, an alkyl or an aromatic group; and each of m and n is an integer of 0 to 2).

IT 1072155-70-4DP, sulfonated compound
(manufacture of solvent-soluble sulfonated polymeric compds. and their intermediates useful for organic electroluminescent devices)

RN 1072155-70-4 HCAPLUS

CN Poly[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazole-3,6-diyl][[4-(diphenylamino)phenyl]imino]-1,4-phenylene(3,4-diphenyl-2,5-thiophenediyl)-1,4-phenylene[[4-(diphenylamino)phenyl]imino]] (CA INDEX NAME)



(manuf. of solvent-sol. sulfonated polymeric compds. and their intermediates useful for org. electroluminescent devices

IPCI C08G0073-02 [I,A]; C08G0073-00 [I,C*]; C09K0011-06 [I,A]; H01L0051-50 [I,A]

IPCR C08G0073-00 [I,C]; C08G0073-02 [I,A]; C09K0011-06 [I,C]; C09K0011-06 [I,A]; H01L0051-50 [I,C]; H01L0051-50 [I,A]

CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 76

IT 1072154-77-8DP, sulfonated compound 1072154-78-9DP, sulfonated compound 1072154-79-0DP, sulfonated compound 1072154-80-3DP, sulfonated compound 1072154-92-7P 1072154-95-0DP, sulfonated compound 1072154-97-2DP, sulfonated compound 1072154-98-3DP, sulfonated compound 1072155-03-3DP, sulfonated compound 1072155-04-4DP, sulfonated compound 1072155-12-4DP, sulfonated compound 1072155-13-5DP, sulfonated compound 1072155-21-5DP, sulfonated compound 1072155-22-6DP, sulfonated compound 1072155-24-8DP, sulfonated compound 1072155-25-9DP, sulfonated compound 1072155-27-1DP, sulfonated compound 1072155-28-2DP, sulfonated compound 1072155-33-9DP, sulfonated compound 1072155-34-0DP, sulfonated compound 1072155-51-1DP, sulfonated compound 1072155-52-2DP, sulfonated compound 1072155-60-2DP, sulfonated compound 1072155-61-3DP, sulfonated compound 1072155-69-1DP, sulfonated compound 1072155-70-4DP, sulfonated compound 1072155-72-6DP, sulfonated compound 1072155-73-7DP, sulfonated compound 1072155-75-9DP, sulfonated compound 1072155-77-1DP, sulfonated compound 1072155-79-3DP, sulfonated compound 1072155-81-7DP, sulfonated compound 1072155-87-3DP, sulfonated compound 1072155-88-4DP, sulfonated compound 1072156-26-3DP, sulfonated compound 1072156-27-4DP, sulfonated compound 1072156-70-7DP, sulfonated compound 1072156-71-8DP, sulfonated compound 1072156-73-0DP, sulfonated compound 1072156-74-1DP, sulfonated compound
(manufacture of solvent-soluble sulfonated polymeric compds. and their intermediates useful for organic electroluminescent devices)

IT 1072154-77-8P 1072154-78-9P 1072154-79-0P 1072154-80-3P 1072154-82-5P 1072154-83-6P 1072154-85-8P 1072154-86-9P 1072154-88-1P 1072154-89-2P 1072154-91-6P 1072154-94-9DP, sulfonated compound 1072154-94-9P 1072154-95-0P 1072154-97-2P 1072154-98-3P 1072155-00-0P 1072155-01-1P 1072155-03-3P 1072155-04-4P 1072155-06-6P 1072155-07-7P 1072155-09-9P 1072155-10-2P 1072155-12-4P 1072155-13-5P 1072155-15-7P 1072155-16-8P 1072155-18-0P 1072155-19-1P 1072155-21-5P 1072155-22-6P 1072155-24-8P 1072155-25-9P 1072155-27-1P 1072155-28-2P 1072155-30-6P 1072155-31-7P 1072155-33-9P 1072155-34-0P 1072155-36-2P 1072155-37-3P 1072155-39-5P 1072155-40-8P 1072155-42-0P 1072155-43-1P 1072155-45-3P 1072155-46-4P 1072155-48-6P 1072155-49-7P 1072155-51-1P

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1072156-68-3P 1072156-70-7P 1072156-71-8P 1072156-73-0P
1072156-74-1P 1072156-76-3P 1072156-77-4P 1072156-79-6P
1072156-80-9P

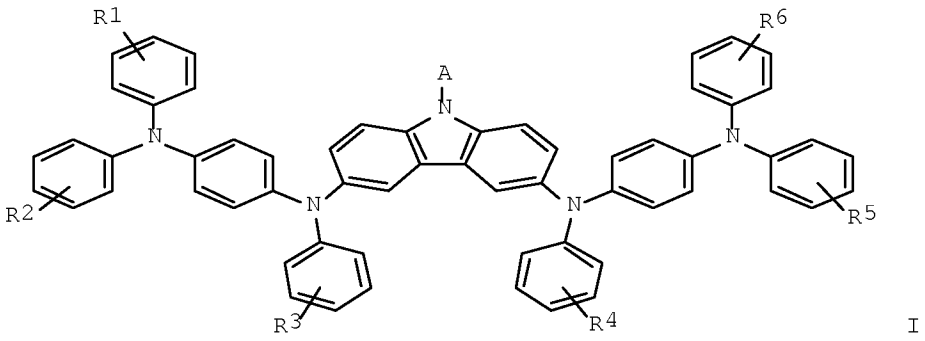
(manufacture of solvent-soluble sulfonated polymeric compds. and their intermediates useful for organic electroluminescent devices)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2007:1237378 HCAPLUS Full-text
DOCUMENT NUMBER: 147:494224
TITLE: Carbazole derivatives, their uses, and organic electroluminescent devices using them
INVENTOR(S): Nakayama, Masami; Kato, Hideyuki
PATENT ASSIGNEE(S): Bando Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007284411	A	20071101	JP 2006-116940	20060420
PRIORITY APPLN. INFO.:			JP 2006-116940	20060420

OTHER SOURCE(S): MARPAT 147:494224
ED Entered STN: 01 Nov 2007
GI



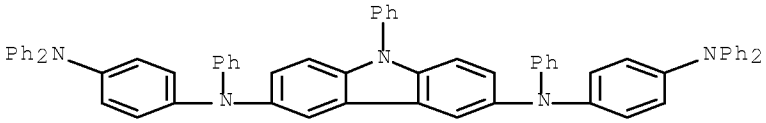
I

AB Title derivs. I [A = H, halo, C1-20 alkyl, C1-20 alkoxy, (un)substituted aryl, (un)substituted heterocyclyl; R1-R6 = H, C1-20 alkyl, C1-20 alkoxy, di(C1-20 alkyl)amino, (un)substituted aryl, (un)substituted heterocyclyl] are used as hole injecting agents and/or hole transport agents. Also claimed are organic electroluminescent devices having a hole injection layer and/or hole transport layer containing above agents.

IT 884510-65-0P 953812-97-0P
(preparation of bis[phenyl(diphenylaminophenyl)amino]carbazoles and organic electroluminescent devices having hole injection layer and/or hole transport layer containing them)

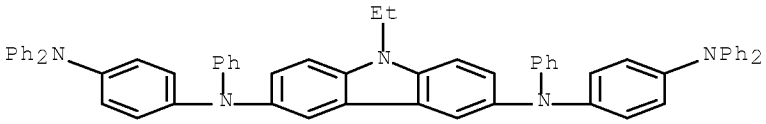
RN 884510-65-0 HCAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6,9-triphenyl- (CA INDEX NAME)



RN 953812-97-0 HCAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-9-ethyl-N3,N6-diphenyl- (CA INDEX NAME)



IPCI C07D0209-88 [I,A]; C07D0209-00 [I,C*]; H01L0051-50 [I,A]; C09K0011-06 [I,A]

IPCR C07D0209-00 [I,C]; C07D0209-88 [I,A]; C09K0011-06 [I,C]; C09K0011-06 [I,A]; H01L0051-50 [I,C]; H01L0051-50 [I,A]

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 27

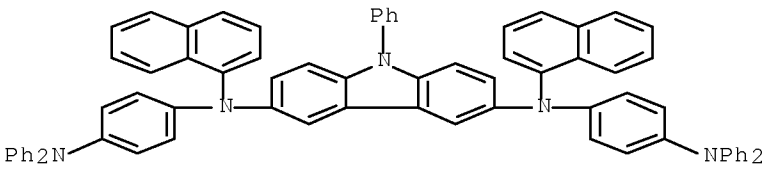
IT 884510-65-0P 953812-97-0P
(preparation of bis[phenyl(diphenylaminophenyl)amino]carbazoles and organic electroluminescent devices having hole injection layer and/or hole transport layer containing them)

L14 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2007:175254 HCAPLUS Full-text
DOCUMENT NUMBER: 146:238974
TITLE: Arylamine compounds which have resistance to repeated oxidation reactions, and light-emitting elements and electronic devices employing the arylamine compounds
INVENTOR(S): Nakashima, Harue; Kawakami, Sachiko
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Japan
SOURCE: U.S. Pat. Appl. Publ., 48pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070037011	A1	20070215	US 2006-500278	20060808
WO 2007020804	A1	20070222	WO 2006-JP315351	20060727
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2007070352	A	20070322	JP 2006-217779	20060810
CN 101243038	A	20080813	CN 2006-80029357	20080213
KR 2008034191	A	20080418	KR 2008-705376	20080304
PRIORITY APPLN. INFO.:			JP 2005-234432 A	20050812
			WO 2006-JP315351 W	20060727

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 146:238974
ED Entered STN: 16 Feb 2007
AB Secondary arylamine compds. having resistance to repeated oxidation reactions are described by the General Formula NH(Ar1)XN(Ar2)Ar3, wherein Ar1 is one of an aryl group having 7 to 25 C atoms and a heteroaryl group having 7 to 25 C atoms, where each of Ar2 and Ar3 is one of an aryl group having 6 to 25 C atoms and a heteroaryl group having 5 to 9 C atoms, and where X is one of a bivalent aromatic hydrocarbon group having 6 to 25 C atoms and a bivalent heterocyclic group having 5 to 10 C atoms. Light-emitting elements and electronic devices employing the arylamine compds. are also discussed.
IT 884510-67-2P
(arylamine compds. which have resistance to repeated oxidation reactions, and light-emitting elements and electronic devices employing arylamine compds.)
RN 884510-67-2 HCAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6-di-1-naphthalenyl-9-phenyl- (CA INDEX NAME)



INCL 428690000; 428917000; 313504000; 257-E51.049; 257-E51.051; 548440000; 548442000; 564429000; 564434000
IPCI H01L0051-54 [I,A]; H01L0051-50 [I,C*]; H05B0033-14 [I,A]; C07C0211-00 [I,A]; C07D0209-88 [I,A]; C07D0209-00 [I,C*]
IPCR H01L0051-50 [I,C]; H01L0051-54 [I,A]; C07C0211-00 [I,C]; C07C0211-00 [I,A]; C07D0209-00 [I,C]; C07D0209-88 [I,A]; H05B0033-14 [I,C]; H05B0033-14 [I,A]
NCL 428/690.000; 257/E51.049; 257/E51.051; 313/504.000; 428/917.000; 548/440.000; 548/442.000; 564/429.000; 564/434.000
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25, 74, 76
IT 884510-66-1P 884510-67-2P
(arylamine compds. which have resistance to repeated oxidation reactions, and light-emitting elements and electronic devices employing arylamine compds.)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L14 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2006:542713 HCAPLUS Full-text
DOCUMENT NUMBER: 145:17408
TITLE: Light emitting element that includes a mixed carbazole derivative-transition metal oxide hole transport layer
INVENTOR(S): Nakashima, Harue; Kawakami, Sachiko; Kumaki, Daisuke; Seo, Satoshi; Ikeda, Hisao; Sakata, Junichiro; Iwaki, Yuji
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: PCT Int. Appl., 145 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006059745	A1	20060608	WO 2005-JP22240	20051128

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT,

TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

CN 101065858	A	20071031	CN 2005-80040713	20051128
CN 100553008	C	20091021		
JP 2006303421	A	20061102	JP 2005-345745	20051130
US 20090058267	A1	20090305	US 2006-584308	20060623
KR 2007090215	A	20070905	KR 2007-714544	20070626
PRIORITY APPLN. INFO.:			JP 2004-347518 A	20041130
			JP 2005-84566 A	20050323
			WO 2005-JP22240 W	20051128

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 145:17408
ED Entered STN: 09 Jun 2006
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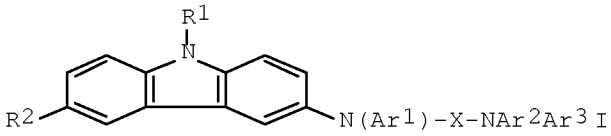
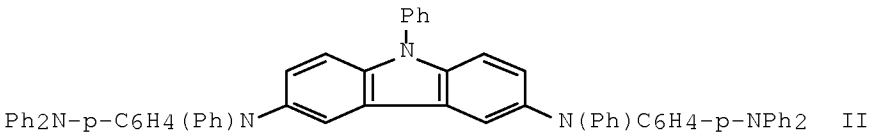




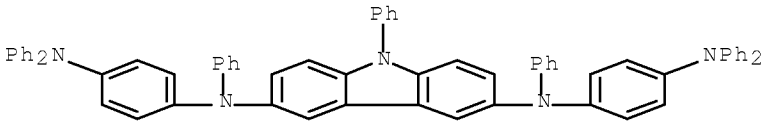
AB One object of the present invention is to provide a light emitting element that includes an organic compound and an inorg. compound and has low driving voltage. The light emitting element of the invention includes a plurality of layers between a pair of electrodes, wherein the plurality of layers includes a layer that contains a carbazole derivative represented by a general formula (I; R1 = e.g., H, alkyl, aryl; R2 = H, alkyl, NAr4YNAr5Ar6; Ar1-Ar6 = aryl, heteroaryl; X, Y = bivalent aromatic hydrocarbon or bivalent heterocycle) and an inorg. compound exhibiting an electron accepting property with respect to the carbazole derivative By utilizing this structure, electrons are transported between the carbazole derivative and the inorg. compound and carriers are internally generated, and hence, the driving voltage of the light emitting element can be reduced. Thus, e.g., coupling of 3,6-diiodo-9-phenylcarbazole (preparation given) with PhNHC6H4-p-NPh2 (preparation given) afforded target carbazole II (75% yield). A 50 nm film containing II and molybdenum oxide (1:1.5 molar ratio) exhibited a charge-transfer absorption band (absent in either component of the film taken individually) representing

hole generation in II and electron acceptance by molybdenum oxide; consequently, the driving voltage of a light-emitting element can be reduced because of this internal carrier generation.

IT 884510-65-0P 884510-67-2P
(light emitting element that includes a mixed carbazole derivative-transition metal oxide hole transport layer)

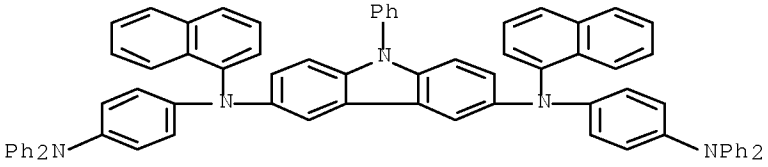
RN 884510-65-0 HCAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6,9-triphenyl- (CA INDEX NAME)



RN 884510-67-2 HCAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6-di-1-naphthalenyl-9-phenyl- (CA INDEX NAME)



IPCI H01L0051-50 [I,A]; C09K0011-06 [I,A]

IPCR H01L0051-50 [I,A]; C09K0011-06 [I,C]; C09K0011-06 [I,A]; H01L0051-50 [I,C]

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 884510-64-9P 884510-65-0P 884510-66-1P
884510-67-2P
(light emitting element that includes a mixed carbazole derivative-transition metal oxide hole transport layer)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2006:380901 HCAPLUS Full-text

DOCUMENT NUMBER: 144:422228

TITLE: Carbazole derivative, and light emitting element and light emitting device using the carbazole derivative

INVENTOR(S): Nakashima, Harue; Kawakami, Sachiko; Kumaki, Daisuke

PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan

SOURCE: PCT Int. Appl., 142 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006043647	A1	20060427	WO 2005-JP19349	20051014
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1805140	A1	20070711	EP 2005-795774	20051014
R: DE, FI, FR, GB, NL				
CN 101039909	A	20070919	CN 2005-80035385	20051014
JP 2006298895	A	20061102	JP 2005-303732	20051018
US 20080284328	A1	20081120	US 2006-583028	20060615
PRIORITY APPLN. INFO.:			JP 2004-304225 A	20041019
			JP 2004-333344 A	20041117
			JP 2005-84533 A	20050323
			WO 2005-JP19349 W	20051014

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 144:422228
ED Entered STN: 27 Apr 2006
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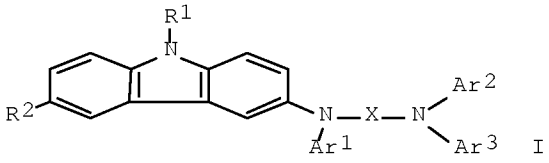
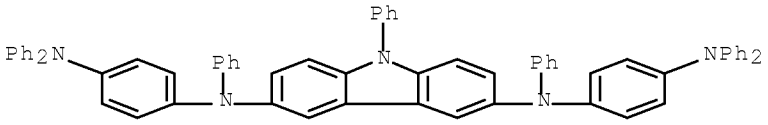


I

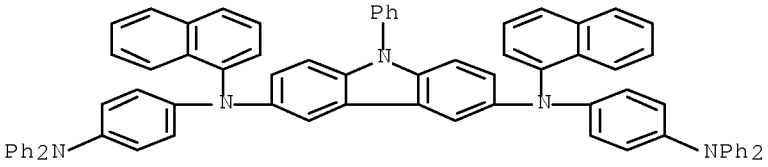
AB The title carbazole derivs. are described by the general formula I (R1 = H, C1-6 alkyl, C6-25 aryl, C5-9 heteroaryl, arylalkyl, or C1-7 acyl; R2 = H, C1-6 alkyl, or -N(Ar4)-Y-N(Ar5)Ar6; Ar1-6 = independently selected C6-25 aryl and/or C5-9 heteroaryl; and X and Y = independently selected C6-25 bivalent aromatic hydrocarbon and/or C5-10 bivalent heterocyclic group). Light-emitting elements incorporating the derivs., devices (e.g., displays) incorporating the elements, and electronic apparatus employing the elements, are also described.

IT 884510-65-0P
(carbazole derivative, and light emitting element and light emitting

device using carbazole derivative)
RN 884510-65-0 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6,9-triphenyl- (CA INDEX NAME)



IT 884510-67-2P
(carbazole derivative, and light emitting element and light emitting device using carbazole derivative)
RN 884510-67-2 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6-di-1-naphthalenyl-9-phenyl- (CA INDEX NAME)



IPCI C07D0209-88 [I,A]; C07D0209-00 [I,C*]; C09K0011-06 [I,A]; H01L0051-50 [I,A]
IPCR C07D0209-00 [I,C]; C07D0209-88 [I,A]; C09K0011-06 [I,C]; C09K0011-06 [I,A]; H01L0051-50 [I,C]; H01L0051-50 [I,A]
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 27, 76
IT 884510-64-9P 884510-65-0P 884510-66-1P
(carbazole derivative, and light emitting element and light emitting device using carbazole derivative)
IT 19606-98-5P 36809-26-4P, 4-Bromotriphenylamine 57103-21-6P, 3,6-Diiodo-9-phenylcarbazole 502161-03-7P 880800-17-9P 884510-67-2P
(carbazole derivative, and light emitting element and light emitting device using carbazole derivative)
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:1042363 HCAPLUS Full-text
DOCUMENT NUMBER: 143:356288
TITLE: Phenyl carbazole derivatives and organic electroluminescent devices using the same
INVENTOR(S): Kim, Ji-Eun; Lee, Jae-Chol; Kim, Kong-Kyeom; Bae,

Jae-Soon; Jang, Jun-Gi; Jeon, Sang-Young; Kang, Min-Soo; Cho, Wook-Dong; Jeon, Byung-Sun; Kim, Yeon-Hwan

PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea

SOURCE: PCT Int. Appl., 126 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005090512	A1	20050929	WO 2005-KR794	20050318
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
KR 2005118098	A	20051215	KR 2004-116388	20041230
US 20050225235	A1	20051013	US 2005-83360	20050318
KR 2006044424	A	20060516	KR 2005-22762	20050318
EP 1725632	A1	20061129	EP 2005-733437	20050318
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 1906268	A	20070131	CN 2005-80001667	20050318
JP 2007520470	T	20070726	JP 2006-546860	20050318
TW 294454	B	20080311	TW 2005-94108390	20050318
IN 2006KN01638	A	20070511	IN 2006-KN1638	20060613

PRIORITY APPLN. INFO.:

KR 2004-18877	A	20040319
KR 2004-116388	A	20041230
WO 2005-KR794	W	20050318

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 143:356288

ED Entered STN: 29 Sep 2005

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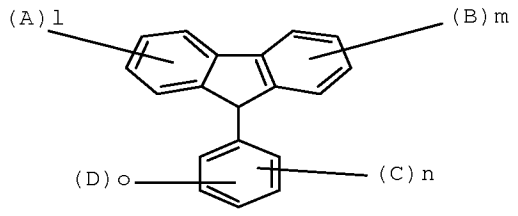


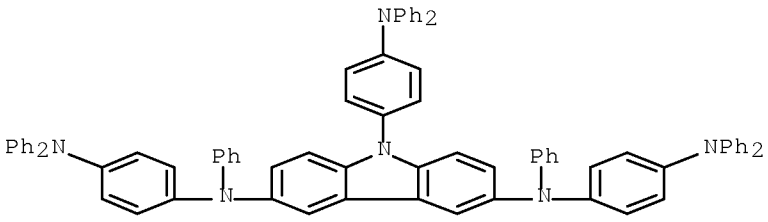
I

AB N-Ph carbazole derivs. are claimed which are described by the general formula I (A = -R1N(R2)-, or -R1N(R2)-Ar-; B = -R3N(R4)-, or -R3N(R4)-Ar-; C = -R5N(R6)-, or -R5N(R6)-Ar-; D = H, -R7N(R8)-, or -R9N(R10)-Ar-; R1-10 = independently selected group each comprising only once or repeatedly ≥2 times, ≥1 of H, C1-20 aliphatic hydrocarbon, aromatic hydrocarbon unsubstituted or substituted with a nitro, nitrile, halogen, alkyl, alkoxy, or amino group, silicon group having an aromatic substituent; heterocyclic aromatic hydrocarbon unsubstituted or substituted with a nitro, nitrile, halogen, alkyl, alkoxy or amino group, thiophene group substituted with a C1-20 hydrocarbon or C6-24 aromatic hydrocarbon; and a boron group substituted with an aromatic hydrocarbon; Ar = an aromatic hydrocarbon unsubstituted or substituted with a nitro, nitrile, halogen, alkyl, alkoxy, or amino group; and l ≥ 1; m ≥ 1; n ≥ 1; and o ≥ 0; with the restriction that the compound represented by formula I wherein R1-6 = H simultaneously and D also = H is excluded). Organic electroluminescent devices using the compds., especially in hole-injecting, hole-transporting, or light-emitting layers, are also described.

IT 865596-39-0 865596-40-3
(Ph carbazole derivs. and organic electroluminescent devices using them)

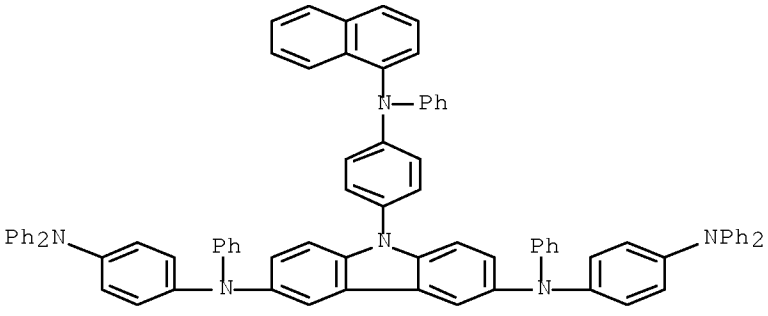
RN 865596-39-0 HCAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6,9-tris[4-(diphenylamino)phenyl]-N3,N6-diphenyl- (CA INDEX NAME)



RN 865596-40-3 HCAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-9-[4-(1-naphthalenylphenylamino)phenyl]-N3,N6-diphenyl- (CA INDEX NAME)



IPCI C09K0011-06 [ICM,7]

IPCR C07D0209-00 [I,C*]; C07D0209-82 [I,A]; C07D0235-00 [I,C*]; C07D0235-04

[I,A]; C07D0417-00 [I,C*]; C07D0417-14 [I,A]; C09K0011-06 [I,C*]; C09K0011-06 [I,A]; H01J0001-00 [I,C*]; H01J0001-62 [I,A]; H01J0063-00 [I,C*]; H01J0063-04 [I,A]; H01L0051-00 [I,C*]; H01L0051-00 [I,A]; H01L0051-50 [N,C*]; H01L0051-50 [N,A]; H05B0033-14 [I,C*]; H05B0033-14 [I,A]

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 27, 76

IT 865594-94-1 865594-95-2 865594-98-5 865595-01-3 865595-02-4
865595-03-5 865595-04-6 865595-05-7 865595-06-8 865595-07-9
865595-08-0 865595-09-1 865595-10-4 865595-11-5 865595-12-6
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865595-19-3 865595-20-6 865595-21-7 865595-22-8 865595-25-1
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865596-47-0 865596-48-1 865596-49-2 865596-50-5 865596-51-6
865596-52-7 865596-53-8 865596-54-9
(Ph carbazole derivs. and organic electroluminescent devices using them)

OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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                 I OR 502161-03-7/BI OR 516-12-1/BI OR 57103-21-6/BI OR
                 603-34-9/BI OR 62-53-3/BI OR 880800-17-9/BI OR 884510-64-9/
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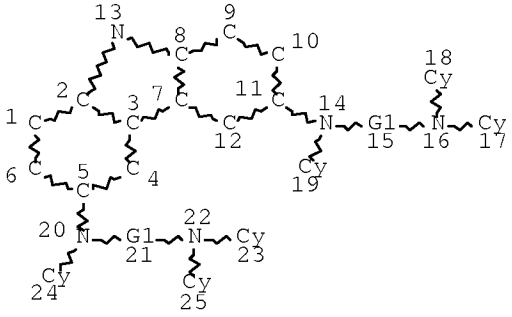


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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS  25

STEREO ATTRIBUTES: NONE
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L10            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L2 AND C46 H33
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                 OR L12 OR L13)
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L14  ANSWER 1 OF 6  HCAPLUS  COPYRIGHT 2010 ACS on STN
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ACCESSION NUMBER: 2008:1282001 HCAPLUS Full-text
DOCUMENT NUMBER: 149:494318
TITLE: Sulfonated polymeric compound, its intermediate, and organic electroluminescent device containing the compound
INVENTOR(S): Sekiguchi, Michiru; Togashi, Kazuhiko
PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Japan
SOURCE: PCT Int. Appl., 165pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

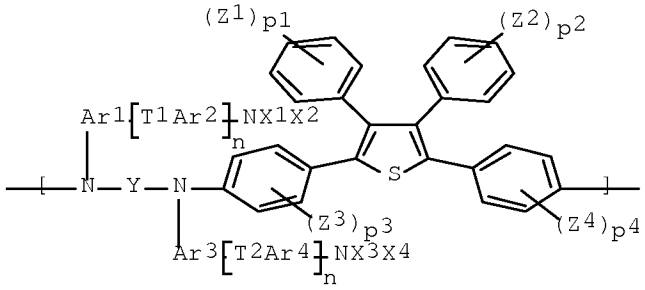
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008126393	A1	20081023	WO 2008-JP861	20080403

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: JP 2007-98103 A 20070404

ED Entered STN: 24 Oct 2008
GI



I

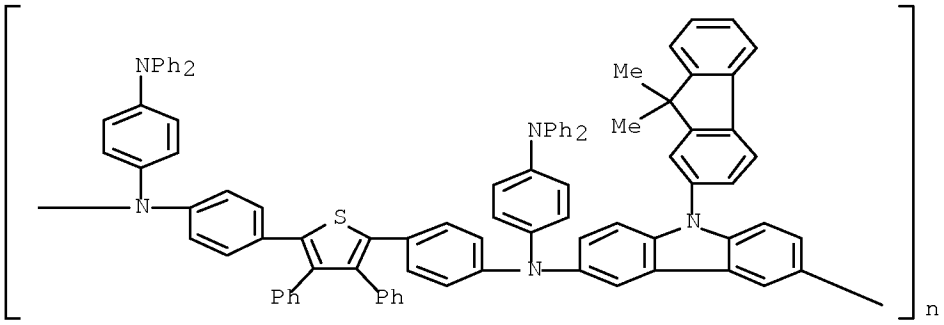
AB A sulfonated polymeric compound, and its intermediate, which sulfonated polymeric compound is characterized by having the structure resulting from introduction of a sulfo group in a polymeric compound having, in its polymer chain, ≥1 of the repeating units (I) (wherein each of Z1 to Z4 is a substituent; each of p1 and p2 is an integer of 0 to 5; each of p3 and p4 is an integer of 0 to 4; each of X1 to X4 is a monovalent aromatic group, provided that X1 and X2, and X3 and X4, may be bonded with each other to thereby form a ring; Y is a bivalent aromatic group; each of Ar1 to Ar4

independently is a bivalent aromatic group, provided that the bivalent aromatic group may be an aromatic group resulting from bonding of aromatic groups to each other leading to cyclization; each of T1 and T2 independently is a single bond or a group selected from the group consisting of -(CH2)t-, -CH=CH-, -C≡C-, -O-, -S-, -CQ1Q2-, -CO-, -SO-, -SO2- and -SiE2-; t is an integer of 1 to 20; each of Q1 and Q2 is an alkyl or an aromatic group, provided that these may be bonded with each other to thereby form a ring; E is a hydrogen atom, an alkyl or an aromatic group; and each of m and n is an integer of 0 to 2).

IT 1072155-70-4DP, sulfonated compound
(manufacture of solvent-soluble sulfonated polymeric compds. and their intermediates useful for organic electroluminescent devices)

RN 1072155-70-4 HCAPLUS

CN Poly[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazole-3,6-diyl][[4-(diphenylamino)phenyl]imino]-1,4-phenylene(3,4-diphenyl-2,5-thiophenediyl)-1,4-phenylene[[4-(diphenylamino)phenyl]imino]] (CA INDEX NAME)



(manuf. of solvent-sol. sulfonated polymeric compds. and their intermediates useful for org. electroluminescent devices

IPCI C08G0073-02 [I,A]; C08G0073-00 [I,C*]; C09K0011-06 [I,A]; H01L0051-50 [I,A]

IPCR C08G0073-00 [I,C]; C08G0073-02 [I,A]; C09K0011-06 [I,C]; C09K0011-06 [I,A]; H01L0051-50 [I,C]; H01L0051-50 [I,A]

CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 76

IT 1072154-77-8DP, sulfonated compound 1072154-78-9DP, sulfonated compound 1072154-79-0DP, sulfonated compound 1072154-80-3DP, sulfonated compound 1072154-92-7P 1072154-95-0DP, sulfonated compound 1072154-97-2DP, sulfonated compound 1072154-98-3DP, sulfonated compound 1072155-03-3DP, sulfonated compound 1072155-04-4DP, sulfonated compound 1072155-12-4DP, sulfonated compound 1072155-13-5DP, sulfonated compound 1072155-21-5DP, sulfonated compound 1072155-22-6DP, sulfonated compound 1072155-24-8DP, sulfonated compound 1072155-25-9DP, sulfonated compound 1072155-27-1DP, sulfonated compound 1072155-28-2DP, sulfonated compound 1072155-33-9DP, sulfonated compound 1072155-34-0DP, sulfonated compound 1072155-51-1DP, sulfonated compound 1072155-52-2DP, sulfonated compound 1072155-60-2DP, sulfonated compound 1072155-61-3DP, sulfonated compound 1072155-69-1DP, sulfonated compound 1072155-70-4DP, sulfonated compound 1072155-72-6DP, sulfonated compound 1072155-73-7DP, sulfonated compound 1072155-75-9DP, sulfonated compound 1072155-77-1DP, sulfonated compound 1072155-79-3DP, sulfonated compound 1072155-81-7DP, sulfonated compound 1072155-87-3DP, sulfonated compound

1072155-88-4DP, sulfonated compound 1072156-26-3DP, sulfonated compound
1072156-27-4DP, sulfonated compound 1072156-70-7DP, sulfonated compound
1072156-71-8DP, sulfonated compound 1072156-73-0DP, sulfonated compound
1072156-74-1DP, sulfonated compound
(manufacture of solvent-soluble sulfonated polymeric compds. and their intermediates useful for organic electroluminescent devices)

IT 1072154-77-8P 1072154-78-9P 1072154-79-0P 1072154-80-3P
1072154-82-5P 1072154-83-6P 1072154-85-8P 1072154-86-9P
1072154-88-1P 1072154-89-2P 1072154-91-6P 1072154-94-9DP,
sulfonated compound 1072154-94-9P 1072154-95-0P 1072154-97-2P
1072154-98-3P 1072155-00-0P 1072155-01-1P 1072155-03-3P
1072155-04-4P 1072155-06-6P 1072155-07-7P 1072155-09-9P
1072155-10-2P 1072155-12-4P 1072155-13-5P 1072155-15-7P
1072155-16-8P 1072155-18-0P 1072155-19-1P 1072155-21-5P
1072155-22-6P 1072155-24-8P 1072155-25-9P 1072155-27-1P
1072155-28-2P 1072155-30-6P 1072155-31-7P 1072155-33-9P
1072155-34-0P 1072155-36-2P 1072155-37-3P 1072155-39-5P
1072155-40-8P 1072155-42-0P 1072155-43-1P 1072155-45-3P
1072155-46-4P 1072155-48-6P 1072155-49-7P 1072155-51-1P
1072155-52-2P 1072155-54-4P 1072155-55-5P 1072155-57-7P
1072155-58-8P 1072155-60-2P 1072155-61-3P 1072155-63-5P
1072155-64-6P 1072155-66-8P 1072155-67-9P 1072155-69-1P
1072155-70-4P 1072155-72-6P 1072155-73-7P 1072155-75-9P
1072155-77-1P 1072155-79-3P 1072155-81-7P 1072155-84-0P
1072155-85-1P 1072155-87-3P 1072155-88-4P 1072155-90-8P
1072155-91-9P 1072155-94-2P 1072155-96-4P 1072155-98-6P
1072155-99-7P 1072156-01-4P 1072156-02-5P 1072156-04-7P
1072156-05-8P 1072156-07-0P 1072156-08-1P 1072156-10-5P
1072156-12-7P 1072156-14-9P 1072156-15-0P 1072156-17-2P
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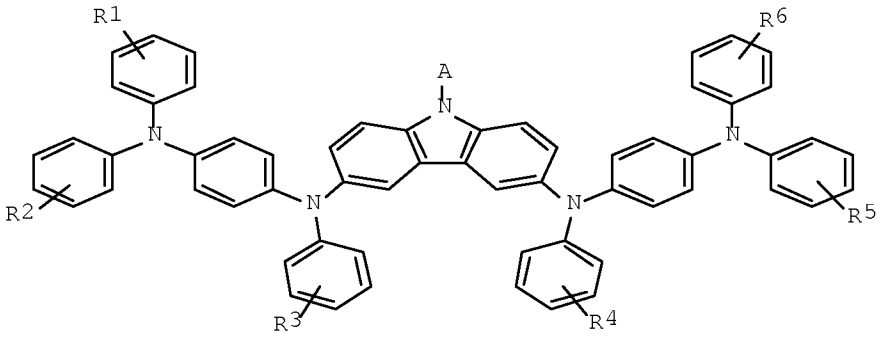
1072156-30-9P 1072156-32-1P 1072156-33-2P 1072156-35-4P
1072156-36-5P 1072156-38-7P 1072156-39-8P 1072156-41-2P
1072156-42-3P 1072156-44-5P 1072156-45-6P 1072156-47-8P
1072156-48-9P 1072156-50-3P 1072156-51-4P 1072156-53-6P
1072156-54-7P 1072156-56-9P 1072156-57-0P 1072156-59-2P
1072156-60-5P 1072156-63-8P 1072156-65-0P 1072156-67-2P
1072156-68-3P 1072156-70-7P 1072156-71-8P 1072156-73-0P
1072156-74-1P 1072156-76-3P 1072156-77-4P 1072156-79-6P
1072156-80-9P
(manufacture of solvent-soluble sulfonated polymeric compds. and their intermediates useful for organic electroluminescent devices)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2007:1237378 HCAPLUS Full-text
DOCUMENT NUMBER: 147:494224
TITLE: Carbazole derivatives, their uses, and organic electroluminescent devices using them
INVENTOR(S): Nakayama, Masami; Kato, Hideyuki
PATENT ASSIGNEE(S): Bando Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007284411	A	20071101	JP 2006-116940	20060420
PRIORITY APPLN. INFO.:			JP 2006-116940	20060420

OTHER SOURCE(S): MARPAT 147:494224
ED Entered STN: 01 Nov 2007
GI

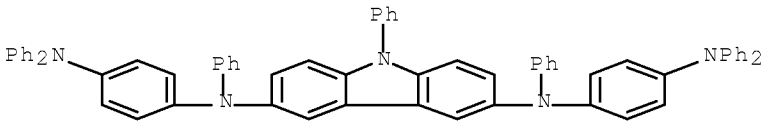


I

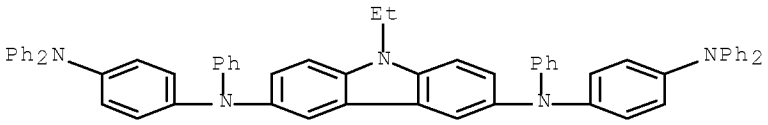
AB Title derivs. I [A = H, halo, C1-20 alkyl, C1-20 alkoxy, (un)substituted aryl, (un)substituted heterocyclyl; R1-R6 = H, C1-20 alkyl, C1-20 alkoxy, di(C1-20 alkyl)amino, (un)substituted aryl, (un)substituted heterocyclyl] are used as hole injecting agents and/or hole transport agents. Also claimed are organic electroluminescent devices having a hole injection layer and/or hole transport layer containing above agents.

IT 884510-65-0P 953812-97-0P
(preparation of bis[phenyl(diphenylaminophenyl)amino]carbazoles and organic electroluminescent devices having hole injection layer and/or hole transport layer containing them)

RN 884510-65-0 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6,9-triphenyl- (CA INDEX NAME)



RN 953812-97-0 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-9-ethyl-N3,N6-diphenyl- (CA INDEX NAME)



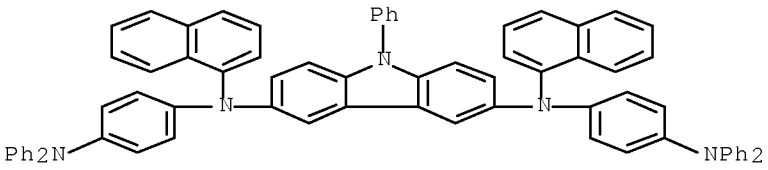
IPCI C07D0209-88 [I,A]; C07D0209-00 [I,C*]; H01L0051-50 [I,A]; C09K0011-06 [I,A]
IPCR C07D0209-00 [I,C]; C07D0209-88 [I,A]; C09K0011-06 [I,C]; C09K0011-06 [I,A]; H01L0051-50 [I,C]; H01L0051-50 [I,A]
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 27
IT 884510-65-0P 953812-97-0P
(preparation of bis[phenyl(diphenylaminophenyl)amino]carbazoles and organic electroluminescent devices having hole injection layer and/or hole transport layer containing them)

L14 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2007:175254 HCAPLUS Full-text
DOCUMENT NUMBER: 146:238974
TITLE: Arylamine compounds which have resistance to repeated oxidation reactions, and light-emitting elements and electronic devices employing the arylamine compounds
INVENTOR(S): Nakashima, Harue; Kawakami, Sachiko
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Japan
SOURCE: U.S. Pat. Appl. Publ., 48pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 20070037011	A1	20070215	US 2006-500278		20060808
WO 2007020804	A1	20070222	WO 2006-JP315351		20060727
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW					
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
JP 2007070352	A	20070322	JP 2006-217779		20060810
CN 101243038	A	20080813	CN 2006-80029357		20080213
KR 2008034191	A	20080418	KR 2008-705376		20080304
PRIORITY APPLN. INFO.:			JP 2005-234432	A	20050812
			WO 2006-JP315351	W	20060727

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 146:238974
ED Entered STN: 16 Feb 2007
AB Secondary arylamine compds. having resistance to repeated oxidation reactions are described by the General Formula NH(Ar1)XN(Ar2)Ar3, wherein Ar1 is one of an aryl group having 7 to 25 C atoms and a heteroaryl group having 7 to 25 C atoms, where each of Ar2 and Ar3 is one of an aryl group having 6 to 25 C atoms and a heteroaryl group having 5 to 9 C atoms, and where X is one of a bivalent aromatic hydrocarbon group having 6 to 25 C atoms and a bivalent heterocyclic group having 5 to 10 C atoms. Light-emitting elements and electronic devices employing the arylamine compds. are also discussed.
IT 884510-67-2P
(arylamine compds. which have resistance to repeated oxidation reactions, and light-emitting elements and electronic devices employing arylamine compds.)
RN 884510-67-2 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6-di-1-naphthalenyl-9-phenyl- (CA INDEX NAME)



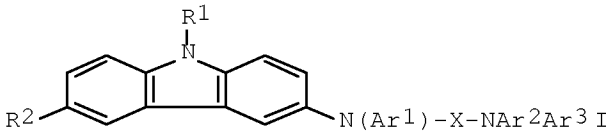
INCL 428690000; 428917000; 313504000; 257-E51.049; 257-E51.051; 548440000; 548442000; 564429000; 564434000
IPCI H01L0051-54 [I,A]; H01L0051-50 [I,C*]; H05B0033-14 [I,A]; C07C0211-00 [I,A]; C07D0209-88 [I,A]; C07D0209-00 [I,C*]
IPCR H01L0051-50 [I,C]; H01L0051-54 [I,A]; C07C0211-00 [I,C]; C07C0211-00 [I,A]; C07D0209-00 [I,C]; C07D0209-88 [I,A]; H05B0033-14 [I,C]; H05B0033-14 [I,A]
NCL 428/690.000; 257/E51.049; 257/E51.051; 313/504.000; 428/917.000; 548/440.000; 548/442.000; 564/429.000; 564/434.000
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25, 74, 76
IT 884510-66-1P 884510-67-2P
(arylamine compds. which have resistance to repeated oxidation reactions, and light-emitting elements and electronic devices employing arylamine compds.)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L14 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2006:542713 HCAPLUS Full-text
DOCUMENT NUMBER: 145:17408
TITLE: Light emitting element that includes a mixed carbazole derivative-transition metal oxide hole transport layer
INVENTOR(S): Nakashima, Harue; Kawakami, Sachiko; Kumaki, Daisuke; Seo, Satoshi; Ikeda, Hisao; Sakata, Junichiro; Iwaki, Yuji
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: PCT Int. Appl., 145 pp.

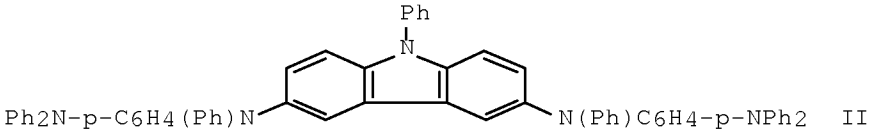
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2006059745	A1	20060608	WO 2005-JP22240		20051128
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
CN 101065858	A	20071031	CN 2005-80040713		20051128
CN 100553008	C	20091021			
JP 2006303421	A	20061102	JP 2005-345745		20051130
US 20090058267	A1	20090305	US 2006-584308		20060623
KR 2007090215	A	20070905	KR 2007-714544		20070626
PRIORITY APPLN. INFO.:			JP 2004-347518	A	20041130
			JP 2005-84566	A	20050323
			WO 2005-JP22240	W	20051128

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 145:17408
ED Entered STN: 09 Jun 2006
GI



I



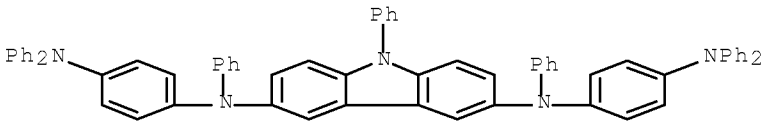
II

AB One object of the present invention is to provide a light emitting element that includes an organic compound and an inorg. compound and has low driving voltage. The light emitting element of the invention includes a plurality of layers between a pair of electrodes, wherein the plurality of layers includes a layer that contains a carbazole derivative represented by a general formula (I; R1 = e.g., H, alkyl, aryl; R2 = H, alkyl, NAr4YNAr5Ar6; Ar1-Ar6 = aryl, heteroaryl; X, Y = bivalent aromatic hydrocarbon or bivalent heterocycle) and an inorg. compound exhibiting an electron accepting property with respect to the carbazole derivative By utilizing this structure, electrons are transported between the carbazole derivative and the inorg. compound and carriers are internally generated, and hence, the driving voltage of the light emitting element can be reduced. Thus, e.g., coupling of 3,6-diiodo-9-phenylcarbazole (preparation given) with PhNHC6H4-p-NPh2 (preparation given) afforded target carbazole II (75% yield). A 50 nm film containing II and molybdenum oxide (1:1.5 molar ratio) exhibited a charge-transfer absorption band (absent in either component of the film taken individually) representing hole generation in II and electron acceptance by molybdenum oxide; consequently, the driving voltage of a light-emitting element can be reduced because of this internal carrier generation.

IT 884510-65-0P 884510-67-2P
(light emitting element that includes a mixed carbazole derivative-transition metal oxide hole transport layer)

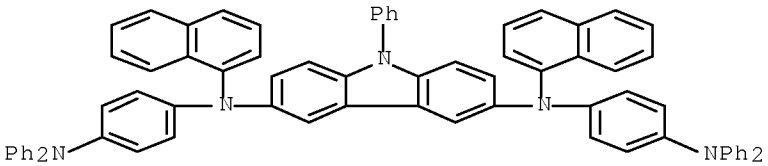
RN 884510-65-0 HCAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6,9-triphenyl- (CA INDEX NAME)



RN 884510-67-2 HCAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6-di-1-naphthalenyl-9-phenyl- (CA INDEX NAME)



IPCI H01L0051-50 [I,A]; C09K0011-06 [I,A]

IPCR H01L0051-50 [I,A]; C09K0011-06 [I,C]; C09K0011-06 [I,A]; H01L0051-50 [I,C]

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 884510-64-9P 884510-65-0P 884510-66-1P
884510-67-2P
(light emitting element that includes a mixed carbazole derivative-transition metal oxide hole transport layer)

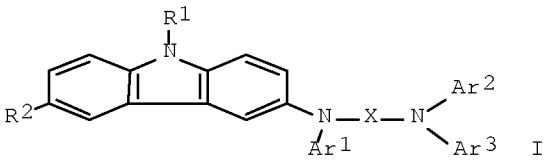
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2006:380901 HCAPLUS Full-text
DOCUMENT NUMBER: 144:422228
TITLE: Carbazole derivative, and light emitting element and light emitting device using the carbazole derivative
INVENTOR(S): Nakashima, Harue; Kawakami, Sachiko; Kumaki, Daisuke
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: PCT Int. Appl., 142 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006043647	A1	20060427	WO 2005-JP19349	20051014
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1805140	A1	20070711	EP 2005-795774	20051014
R: DE, FI, FR, GB, NL				
CN 101039909	A	20070919	CN 2005-80035385	20051014
JP 2006298895	A	20061102	JP 2005-303732	20051018
US 20080284328	A1	20081120	US 2006-583028	20060615

PRIORITY APPLN. INFO.:	JP 2004-304225	A	20041019
	JP 2004-333344	A	20041117
	JP 2005-84533	A	20050323
	WO 2005-JP19349	W	20051014

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 144:422228
ED Entered STN: 27 Apr 2006
GI



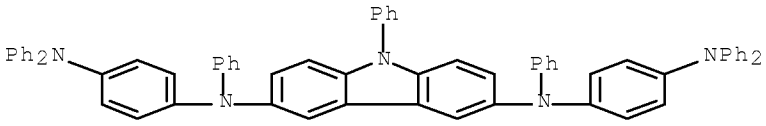
I

AB The title carbazole derivs. are described by the general formula I (R1 = H, C1-6 alkyl, C6-25 aryl, C5-9 heteroaryl, arylalkyl, or C1-7 acyl; R2 = H, C1-6 alkyl, or -N(Ar4)-Y-N(Ar5)Ar6; Ar1-6 = independently selected C6-25 aryl and/or C5-9 heteroaryl; and X and Y = independently selected C6-25 bivalent aromatic hydrocarbon and/or C5-10 bivalent heterocyclic group). Light-emitting elements incorporating the derivs., devices (e.g., displays) incorporating the elements, and electronic apparatus employing the elements, are also described.

IT 884510-65-0P
(carbazole derivative, and light emitting element and light emitting device using carbazole derivative)

RN 884510-65-0 HCAPLUS

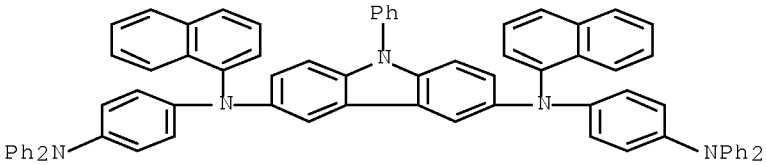
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6,9-triphenyl- (CA INDEX NAME)



IT 884510-67-2P
(carbazole derivative, and light emitting element and light emitting device using carbazole derivative)

RN 884510-67-2 HCAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6-di-1-naphthalenyl-9-phenyl- (CA INDEX NAME)



IPCI C07D0209-88 [I,A]; C07D0209-00 [I,C*]; C09K0011-06 [I,A]; H01L0051-50 [I,A]

IPCR C07D0209-00 [I,C]; C07D0209-88 [I,A]; C09K0011-06 [I,C]; C09K0011-06 [I,A]; H01L0051-50 [I,C]; H01L0051-50 [I,A]

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 27, 76

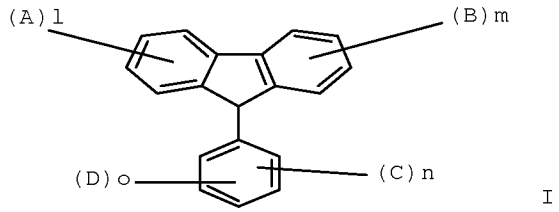
IT 884510-64-9P 884510-65-0P 884510-66-1P
(carbazole derivative, and light emitting element and light emitting device using carbazole derivative)
IT 19606-98-5P 36809-26-4P, 4-Bromotriphenylamine 57103-21-6P, 3,6-Diiodo-9-phenylcarbazole 502161-03-7P 880800-17-9P 884510-67-2P
(carbazole derivative, and light emitting element and light emitting device using carbazole derivative)
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:1042363 HCAPLUS Full-text
DOCUMENT NUMBER: 143:356288
TITLE: Phenyl carbazole derivatives and organic electroluminescent devices using the same
INVENTOR(S): Kim, Ji-Eun; Lee, Jae-Chol; Kim, Kong-Kyeom; Bae, Jae-Soon; Jang, Jun-Gi; Jeon, Sang-Young; Kang, Min-Soo; Cho, Wook-Dong; Jeon, Byung-Sun; Kim, Yeon-Hwan
PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
SOURCE: PCT Int. Appl., 126 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2005090512	A1	20050929	WO 2005-KR794		20050318
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
KR 2005118098	A	20051215	KR 2004-116388		20041230
US 20050225235	A1	20051013	US 2005-83360		20050318
KR 2006044424	A	20060516	KR 2005-22762		20050318
EP 1725632	A1	20061129	EP 2005-733437		20050318
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR					
CN 1906268	A	20070131	CN 2005-80001667		20050318
JP 2007520470	T	20070726	JP 2006-546860		20050318
TW 294454	B	20080311	TW 2005-94108390		20050318
IN 2006KN01638	A	20070511	IN 2006-KN1638		20060613
PRIORITY APPLN. INFO.:			KR 2004-18877	A	20040319
			KR 2004-116388	A	20041230

WO 2005-KR794 W 20050318

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 143:356288
ED Entered STN: 29 Sep 2005
GI



I

AB N-Ph carbazole derivs. are claimed which are described by the general formula I (A = -R1N(R2)-, or -R1N(R2)-Ar-; B = -R3N(R4)-, or -R3N(R4)-Ar-; C = -R5N(R6)-, or -R5N(R6)-Ar-; D = H, -R7N(R8)-, or -R9N(R10)-Ar-; R1-10 = independently selected group each comprising only once or repeatedly ≥2 times, ≥1 of H, C1-20 aliphatic hydrocarbon, aromatic hydrocarbon unsubstituted or substituted with a nitro, nitrile, halogen, alkyl, alkoxy, or amino group, silicon group having an aromatic substituent; heterocyclic aromatic hydrocarbon unsubstituted or substituted with a nitro, nitrile, halogen, alkyl, alkoxy or amino group, thiophene group substituted with a C1-20 hydrocarbon or C6-24 aromatic hydrocarbon; and a boron group substituted with an aromatic hydrocarbon; Ar = an aromatic hydrocarbon unsubstituted or substituted with a nitro, nitrile, halogen, alkyl, alkoxy, or amino group; and l ≥ 1; m ≥ 1; n ≥ 1; and o ≥ 0; with the restriction that the compound represented by formula I wherein R1-6 = H simultaneously and D also = H is excluded). Organic electroluminescent devices using the compds., especially in hole-injecting, hole-transporting, or light-emitting layers, are also described.

IT 865596-39-0 865596-40-3
(Ph carbazole derivs. and organic electroluminescent devices using them)

RN 865596-39-0 HCAPLUS
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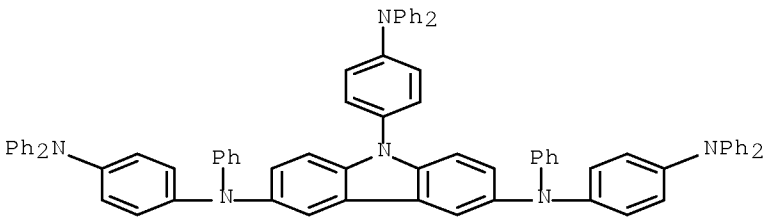
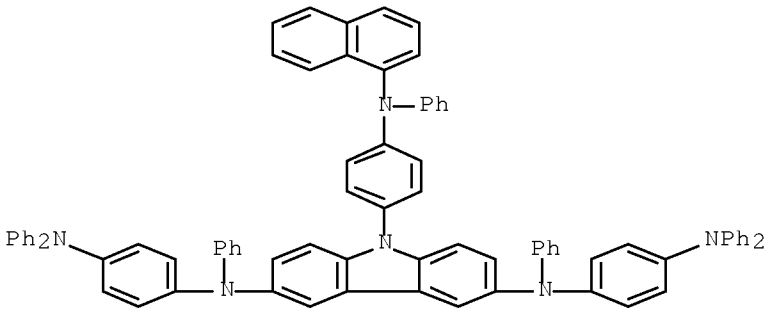


RN 865596-40-3 HCAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-9-[4-(1-

naphthalenylphenylamino)phenyl]-N3,N6-diphenyl- (CA INDEX NAME)



IPCI C09K0011-06 [ICM,7]
IPCR C07D0209-00 [I,C*]; C07D0209-82 [I,A]; C07D0235-00 [I,C*]; C07D0235-04 [I,A]; C07D0417-00 [I,C*]; C07D0417-14 [I,A]; C09K0011-06 [I,C*]; C09K0011-06 [I,A]; H01J0001-00 [I,C*]; H01J0001-62 [I,A]; H01J0063-00 [I,C*]; H01J0063-04 [I,A]; H01L0051-00 [I,C*]; H01L0051-00 [I,A]; H01L0051-50 [N,C*]; H01L0051-50 [N,A]; H05B0033-14 [I,C*]; H05B0033-14 [I,A]
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 27, 76
IT 865594-94-1 865594-95-2 865594-98-5 865595-01-3 865595-02-4
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865595-08-0 865595-09-1 865595-10-4 865595-11-5 865595-12-6
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(Ph carbazole derivs. and organic electroluminescent devices using them)
OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS

		RECORD (17 CITINGS)
REFERENCE COUNT:	4	THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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                 OR 134-32-7/BI OR 19606-98-5/BI OR 36809-26-4/BI OR
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                 BI OR 62-53-3/BI OR 880800-17-9/BI OR 884510-64-9/BI OR
                 884510-65-0/BI OR 884510-66-1/BI OR 884510-67-2/BI)
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L5             6 SEA SSS FUL L3
                 SAV L5 CLA028/A
L6             2 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND L5
L7             1 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND C28 H22 N2/MF
L8             1 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND C24 H20 N2/MF
L9             1 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND C18 H11 I2 N/MF
L10            1 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND C46 H33 N3/MF
L11            1 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND  C42 H31 N3/MF
L12            1 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND C18 H12 I N/MF
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L18            8 SEA SPE=ON  ABB=ON  PLU=ON  L17 NOT L14
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